

## I. LISTING OF THE PENDING CLAIMS

1-7 (Cancelled)

8. (Currently Amended) A method of etching and cleaning a TiW alloy layer comprising:

providing a substrate comprising an exposed TiW alloy layer and further comprising at least one of Al, Cu, or an AlCu alloy;

etching the TiW alloy by a method which results in formation of etching residue; contacting the substrate with a TiW-selective composition comprising water and between about 7.5% to about 15% by weight of periodic acid, wherein the composition is effective in removing said TiW alloy and removing residues of etching of TiW alloy, wherein the removal rate of the TiW alloy and residue thereof is greater than a removal rate of Al, Cu, or an AlCu alloy, and

wherein the pH of the composition is less than 7, for a time and at a temperature sufficient to cause the composition to remove at least a portion of the TiW alloy and substantially all of the etching residue from the substrate wherein said removal occurs without the use of abrasives; and

rinsing the substrate, wherein said composition does not include abrasives.

9. (Previously Presented) The method of claim 8, wherein the substrate further comprises an exposed AlCu alloy, wherein by removing a relatively small amount of Al, Cu, or an AlCu alloy means the specificity of removal of TiW to AlCu, in terms of etch rate, is at least about 3.

10. (Previously Presented) The method of claim 9, wherein the substrate further comprises an exposed AlCu alloy, wherein the specificity of removal of TiW to AlCu, in terms of etch rate, is at least about 5.

11. (Previously Presented) The method of claim 10, wherein the substrate further comprises an exposed AlCu alloy, wherein the specificity of removal of TiW to AlCu, in terms of etch rate, is at least about 7.

12. (Original) The method of claim 8, wherein the temperature at which the solution is used ranges from about 20° C to about 100° C.

13. (Original) The method of claim 8, wherein the temperature at which the solution is used ranges from about 30° C to about 40° C.

14. (Currently Amended) A method of etching and cleaning TiW layer comprising:  
providing a substrate comprising a TiW alloy layer and etching residues from prior etching of the TiW layer;

contacting the substrate with a solution containing hydrogen peroxide for a time and at a temperature sufficient to cause the solution to substantially remove exposed TiW alloy;

contacting the substrate with the composition comprising water and between about 5% and about 20% by weight of periodic acid for a time and at a temperature sufficient to cause the composition to substantially remove the residues from the substrate wherein said removal occurs without the use of abrasives; and

rinsing the substrate, wherein said composition does not include abrasives.

15. (Original) The method of claim 14, wherein the temperature at which the solution is used ranges from about 20° C to about 100° C.

16. (Original) The method of claim 15, wherein the temperature at which the solution is used ranges from about 30° C to about 40° C.

17. (Previously Presented) The method of claim 15, wherein the composition is substantially free of hydrofluoric acid.

18. (Previously Presented) The method of claim 15, wherein the composition contains periodic acid in an amount from about 7.5% to about 15% by weight of the composition.

19. (Previously Presented) The method of claim 15, wherein the composition contains periodic acid in an amount from about 8% to about 12% by weight of the composition, and wherein the pH of the composition is less than about 4.